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PATENT

Attorney Docket No. 13505US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Monzyk, Bruce F. et al.

Serial No.: 10/626,500

Group No.: 1723

Filed: July 23, 2003

Examiner: Drodge, Joseph W.

For: METAL REMOVAL AND RECOVERY BY LIQUID-LIQUID EXTRACTION

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**DECLARATION OF BRUCE MONZYK – 37 C.F.R. § 1.132**

I, Bruce F. Monzyk, 7460 Blaney Road, Delaware, OH 43015, United States of America, hereby declare:

1. I received a Bachelor of Science degree in Chemistry and a Masters in Inorganic Chemistry from the University of Missouri-Columbia, and a PhD in Bio-inorganic Chemistry from Duke University, Durham NC.
2. My broad experience encompasses work as a Research Chemist, Senior Research Chemist, Associate Research Fellow, Research Scientist, Senior Research Scientist, and Research Leader at the Monsanto Company and Battelle Memorial Institute.

3. I am currently a Research Leader in the Process Engineering Group at Battelle Memorial Institute. I have authored or coauthored about 19 scientific papers, have been inventor or co-inventor of about 28 US patents and have several patents pending.
4. That I have read and understand the present Patent Application having Serial No. 10/626.500; and the related Office Action, mailed March 9, 2005.
5. I am a co-inventor of the present application together with H. Nick Conckle, Timothy M. Werner, J. Kevin Rose, and Satya P. Chauhan. Presently claims 1-31 stand rejected.
6. My comments here relate to the present office action and the patent to Delmas et al (US 6,267,936), hereinafter Delmas.

With regard to Delmas, the Examiner has indicated that colloidal capture of metal ions is disclosed at column 7, lines 54-56 and column 7, lines 23-25, and column 9, lines 16-18.

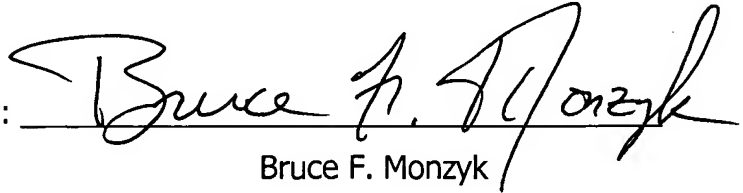
My review of Delmas indicates that there is no mention of colloidal capture of metal ions. The cited passages indicate that the aminomethylenephosphonic acid groups complex with the metal ions. Based on my training and experience, the type of metal ion complexing involved here is that of a chelating agent. The phosphonic group together with the amine react with the metal ions to form cyclic "chelate" compounds having coordinate covalent bonds. Alternatively, another type of complexing can also be the formation of monodentate coordination compounds with the phosphonate moiety resulting in formation of coordinate covalent bonds. However, metal ion colloid formation and capture do not appear to be involved.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both,

under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: July 11, 2005

By: \_\_\_\_\_

A handwritten signature in cursive script, reading "Bruce F. Monzyk", written over a horizontal line.

Bruce F. Monzyk